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Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Report of the Secretary-General

Summary

In accordance with Economic and Social Council resolution 645 G (XXIII), the Secretary-General reports biennially to the Council on the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals, and of its two subcommittees.

The present report concerns the work of the Committee of Experts during the biennium 2011-2012 and the implementation of Economic and Social Council resolution 2011/25.

In accordance with that resolution, the secretariat has published the seventeenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*, amendment 1 to the fifth revised edition of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* and the fourth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*.

All the main legal instruments and codes governing the international transport of dangerous goods by sea, air, road, rail or inland waterway have been amended accordingly, with effect from 1 January 2013, and many Governments have also transposed the provisions of the Model Regulations into their own legislation for domestic traffic for application from 2013.

Many Governments and international organizations have revised or taken steps to revise existing national and international legislation in order to implement the Globally Harmonized System as soon as possible.

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The Committee adopted amendments to the Model Regulations and the *Manual of Tests and Criteria*, which consist mainly of new or revised provisions that concern the classification of solid oxidizing substances; the transport of adsorbed gases; lithium batteries (including damaged or defective lithium batteries, lithium batteries for disposal or recycling); asymmetric capacitors; discarded packagings; ammonium nitrate and radioactive material; the testing of gas cartridges and fuel cell cartridges; the marking of bundles of cylinders; and the applicability of International Organization for Standardization standards to the manufacture of new pressure receptacles or service equipment.

The Committee also adopted amendments to the Globally Harmonized System that include a new test method for oxidizing solids, miscellaneous provisions intended to further clarify the criteria for the hazard classes skin corrosion/irritation, severe eye damage/irritation and aerosols, and to complement the information to be included in the Safety Data Sheet; revised and simplified classification and labelling summary tables; a new codification system for hazard pictograms and revised and further rationalized precautionary statements.

The Committee adopted a programme of work for the biennium 2013-2014; sessions for the Subcommittee of Experts on the Transport of Dangerous Goods, for the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals and for the Committee have been planned for the period 2013-2014, in accordance with Economic and Social Council resolution 1999/65.

The Committee is recommending a draft resolution on its work for adoption by the Economic and Social Council.

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I. Draft resolution for adoption by the Economic and Social Council

1. The Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals recommends to the Economic and Social Council the adoption of the following draft resolution:

Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

The Economic and Social Council,

Recalling its resolutions 1999/65 of 26 October 1999 and 2011/25 of 27 July 2011,

Having considered the report of the Secretary-General on the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals during the biennium 2011-2012,[1]

A
Work of the Committee regarding the transport of dangerous goods

Recognizing the importance of the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals for the harmonization of codes and regulations relating to the transport of dangerous goods,

Bearing in mind the need to maintain safety standards at all times and to facilitate trade, as well as the importance of these issues to the various organizations responsible for modal regulations, while meeting the growing concern for the protection of life, property and the environment through the safe and secure transport of dangerous goods,

Noting the ever-increasing volume of dangerous goods being introduced into worldwide commerce and the rapid expansion of technology and innovation,

Recalling that, while the major international instruments governing the transport of dangerous goods by the various modes of transport and many national regulations are now better harmonized with the Model Regulations annexed to the Committee's recommendations on the transport of dangerous goods, further work on harmonizing these instruments is necessary to enhance safety and to facilitate trade, and recalling also that uneven progress in the updating of national inland transport legislation in some countries of the world continues to present serious challenges to international multimodal transport,

1. *Expresses its appreciation* for the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of

[1] E/2013/51.

Classification and Labelling of Chemicals with respect to matters relating to the transport of dangerous goods, including their security in transport;

2. *Requests* the Secretary-General:

(a) To circulate the new and amended recommendations on the transport of dangerous goods[2] to the Governments of Member States, the specialized agencies, the International Atomic Energy Agency and other international organizations concerned;

(b) To publish the eighteenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*[3] and amendment 2 to the fifth revised edition[4] of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* in all the official languages of the United Nations, in the most cost-effective manner, no later than the end of 2013;

(c) To make those publications available on the website of the Economic Commission for Europe,[5] which provides secretariat services to the Committee, in book format and also as a CD-ROM;

3. *Invites* all Governments, the regional commissions, the specialized agencies, the International Atomic Energy Agency and the other international organizations concerned to transmit to the secretariat of the Committee their views on the work of the Committee, together with any comments that they may wish to make on the recommendations on the transport of dangerous goods;

4. *Invites* all interested Governments, the regional commissions, the specialized agencies and the international organizations concerned to take into account the recommendations of the Committee when developing or updating appropriate codes and regulations;

5. *Requests* the Committee to study, in consultation with the International Maritime Organization, the International Civil Aviation Organization, the regional commissions and the intergovernmental organizations concerned, the possibilities of improving the implementation of the Model Regulations on the transport of dangerous goods in all countries for the purposes of ensuring a high level of safety and eliminating technical barriers to international trade, including through the further harmonization of international agreements or conventions governing the international transport of dangerous goods;

6. *Invites* all Governments, as well as the regional commissions and organizations concerned, the International Maritime Organization and the International Civil Aviation Organization to provide feedback to the Committee regarding differences between the provisions of national, regional or international legal instruments and those of the Model Regulations, in order to enable the Committee to develop cooperative guidelines for enhancing consistency between these requirements and reducing unnecessary impediments; to identify existing substantive and international, regional and national differences, with the aim of reducing those differences in modal treatment to the greatest extent practical and ensuring that where differences are necessary they do not pose impediments to the

[2] See ST/SG/AC.10/40/Add.1 and 2.

[3] ST/SG/AC.10/1/Rev.18.

[4] ST/SG/AC.10/11/Rev.5/Amend.2.

[5] www.unece.org/trans/danger/danger.html.

safe and efficient transport of dangerous goods; and to undertake an editorial review of the Model Regulations and various modal instruments with the aim of improving clarity, user friendliness and ease of translation;

B
Work of the Committee regarding the Globally Harmonized System of Classification and Labelling of Chemicals

Bearing in mind that in paragraph 23 (*c*) of the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan of Implementation),[6] countries were encouraged to implement the Globally Harmonized System of Classification and Labelling of Chemicals as soon as possible with a view to having the system fully operational by 2008,

Bearing in mind also that the General Assembly, in its resolution 57/253 of 20 December 2002, endorsed the Johannesburg Plan of Implementation and requested the Economic and Social Council to implement the provisions of the Plan relevant to its mandate and, in particular, to promote the implementation of Agenda 21[7] by strengthening system-wide coordination,

Noting with satisfaction:

(a) That the Economic Commission for Europe and all United Nations programmes and specialized agencies concerned with chemical safety in the field of transport or of the environment, in particular the United Nations Environment Programme, the International Maritime Organization and the International Civil Aviation Organization, have already taken appropriate steps to amend or update their legal instruments in order to give effect to the Globally Harmonized System of Classification and Labelling of Chemicals or are considering amending them as soon as possible;

(b) That the International Labour Organization, the Food and Agriculture Organization of the United Nations and the World Health Organization are also taking appropriate steps to adapt their existing chemical safety recommendations, codes and guidelines to the Globally Harmonized System, in particular in the areas of occupational health and safety, pesticide management and the prevention and treatment of poisoning;

(c) That national legislation or standards implementing the Globally Harmonized System (or allowing its application) in one or several sectors have already been issued in Brazil (2009), China (2010), Ecuador (2009), Japan (2006), Mauritius (2004), Mexico (2011), New Zealand (2001), the Republic of Korea (2006), Russian Federation (2010), Serbia (2010), Singapore (2008), South Africa (2009), Switzerland (2009), Uruguay (2009) and Viet Nam (2009), as well as in the

[6] *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

[7] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

27 countries members of the European Union and the 3 countries members of the European Economic Area (2008);[8]

(d) That in Australia, the Model Work Health and Safety legislation and its related regulations and Codes of Practice implementing the provisions of the third revised edition of the *Globally Harmonized System of Classifications and Labelling of Chemicals (GHS)*,[8] have already entered into force in five out of nine of the Australian jurisdictions in January 2012, and are expected to enter into force in two additional jurisdictions in January 2013;[8]

(e) That in the European Union, the second and third adaptations to technical progress to its Classification, Labelling and Packaging Regulation, intended to bring its provisions into line with those of the third revised edition of the Globally Harmonized System, entered into force on 19 April 2011 and 31 July 2012, respectively, and that a fourth adaptation intended to align the aforementioned regulation with the fourth revised edition of the *Globally Harmonized System* is expected to be published in 2013;[8]

(f) That in Thailand, the Ministry of Industry's Notification on a System of Hazard Classification and Communication of Hazardous Substances and its attached Provision, giving effect to the provisions of the third revised edition of the *Globally Harmonized System*, entered into force on 13 March 2012, and that similar pieces of legislation implementing the Globally Harmonized System in other sectors (for example, supply/use) were being finalized;[8]

(g) That in the United States of America, the revised Hazard Communication Standard implementing the provisions of the third revised edition of the Globally Harmonized System at the workplace became effective on 25 May 2012;[8]

(h) That work on the development or revision of national legislation, standards or guidelines applicable to chemicals in the implementation of the Globally Harmonized System continues in other countries (for example, Canada, Chile, Indonesia and the Philippines), while in some others (e.g., Barbados, Chile, Colombia, Democratic Republic of the Congo, Gambia, Guatemala, Jamaica, Kyrgyzstan, Malaysia, Mexico, Plurinational State of Bolivia, Tajikistan and Zambia) activities related to the development of sectoral implementation plans or national implementation strategies are being conducted or are expected to be initiated soon;[8]

(i) That a number of United Nations programmes and specialized agencies and regional organizations, in particular the United Nations Institute for Training and Research, the International Labour Organization, the World Health Organization, the Economic Commission for Europe, the Asia-Pacific Economic Cooperation, the Organization for Economic Cooperation and Development, Governments, the European Union and non-governmental organizations representing the chemical industry, have organized or contributed to multiple workshops, seminars and other capacity-building activities at the international, regional, subregional and national levels, in order to raise administration, health sector and industry awareness and to prepare for or support the implementation of the Globally Harmonized System,

[8] Information on implementation of the Globally Harmonized System by country and through international legal instruments, recommendations, codes and guidelines is available from www.unece.org/trans/danger/publi/ghs/implementation_e.html.

Aware that effective implementation will require further cooperation between the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals and the international bodies concerned, continued efforts by the Governments of Member States, cooperation with the industry and other stakeholders, and significant support for capacity-building activities in countries with economies in transition and developing countries,

Recalling the particular significance of the United Nations Institute for Training and Research, the International Labour Organization and the Organization for Economic Cooperation and Development Global Partnership for Capacity-building to Implement the Globally Harmonized System of Classification and Labelling of Chemicals for building capacities at all levels,

1. *Commends* the Secretary-General on the publication of the fourth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*[9] in the six official languages of the United Nations, in book form and on CD-ROM, and its availability, together with related informational material, on the website of the Economic Commission for Europe[5] which provides secretariat services to the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals;

2. *Expresses its deep appreciation* to the Committee, the Economic Commission for Europe, United Nations programmes, specialized agencies and other organizations concerned for their fruitful cooperation and their commitment to the implementation of the Globally Harmonized System;

3. *Requests* the Secretary-General:

(a) To circulate the amendments[10] to the fourth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals* to the Governments of Member States, the specialized agencies and other international organizations concerned;

(b) To publish the fifth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*[11] in all the official languages of the United Nations in the most cost-effective manner, no later than the end of 2013, and to make it available on CD-ROM and on the website of the Economic Commission for Europe;[5]

(c) To continue to make information on the implementation of the Globally Harmonized System available on the website of the Economic Commission for Europe;[8]

4. *Invites* Governments that have not yet done so to take the necessary steps, through appropriate national procedures and/or legislation, to implement the Globally Harmonized System as soon as possible;

5. *Reiterates its invitation* to the regional commissions, United Nations programmes, specialized agencies and other organizations concerned to promote the implementation of the Globally Harmonized System and, where relevant, to amend their respective international legal instruments addressing transport safety,

[9] United Nations publication, Sales No. E.11.II.E.6 and corrigenda.
[10] ST/SG/AC.10/40/Add.3.
[11] ST/SG/AC.10/30/Rev.5.

workplace safety, consumer protection or the protection of the environment, so as to give effect to the Globally Harmonized System through such instruments;

6. *Invites* Governments, the regional commissions, United Nations programmes, specialized agencies and other organizations concerned to provide feedback to the Subcommittee of Experts on the Globally Harmonized System on the steps taken for the implementation of the Globally Harmonized System in all relevant sectors, through international, regional or national legal instruments, recommendations, codes and guidelines, including, when applicable, information about the transitional periods for its implementation;

7. *Encourages* Governments, the regional commissions, United Nations programmes, specialized agencies and other relevant international organizations and non-governmental organizations, in particular those representing industry, to strengthen their support for the implementation of the Globally Harmonized System by providing financial contributions and/or technical assistance for capacity-building activities in developing countries and countries with economies in transition;

C

Programme of work of the Committee

Taking note of the programme of work of the Committee for the biennium 2013-2014 as contained in paragraphs 47 and 48 of the report of the Secretary-General,[1]

Noting the relatively poor level of participation of experts from developing countries and countries with economies in transition in the work of the Committee and the need to promote their wider participation in its work,

1. *Decides* to approve the programme of work of the Committee;

2. *Stresses* the importance of the participation of experts from developing countries and from countries with economies in transition in the work of the Committee, calls, in that regard, for voluntary contributions to facilitate their participation, including through support for travel and daily subsistence, and invites Member States and international organizations in a position to do so to contribute;

3. *Requests* the Secretary-General to submit to the Economic and Social Council in 2015 a report on the implementation of the present resolution, the recommendations on the transport of dangerous goods and the Globally Harmonized System of Classification and Labelling of Chemicals.

II. Implementation of Economic and Social Council resolution 2011/25

A. Publications

2. As requested by the Economic and Social Council in its resolution 2011/25, the Secretary-General prepared the seventeenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*.[12] The

[12] United Nations publication, Sales No. E.11.VIII.1 and corrigenda.

edition was published for official circulation in Arabic (170 copies), Chinese (95 copies) and Russian (175 copies), and for official circulation and sale in English (3,065 copies), French (700 copies) and Spanish (350 copies).

3. The amendment 1 to the fifth revised edition of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria*[13] was published for official circulation in Arabic (158 copies), Chinese (97 copies) and Russian (160 copies) and for official circulation and sale in English (1,266 copies), French (389 copies) and Spanish (234 copies).

4. The fourth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*[9] was published for official circulation in Arabic (180 copies), Chinese (120 copies) and Russian (180 copies) and for official circulation and sale in English (2,560 copies), French (635 copies) and Spanish (375 copies).

5. Combined versions of the *Model Regulations*, the *Manual of Tests and Criteria* and the *Globally Harmonized System of Classification and Labelling of Chemicals* were also made available on a CD-ROM containing the English and French versions.

6. The *Model Regulations*, the *Manual of Tests and Criteria* and the *Globally Harmonized System* are available online in all languages on the website of the Economic Commission for Europe.[5]

B. Implementation of the Recommendations on the Transport of Dangerous Goods: Model Regulations

7. In its resolution 2011/25, the Economic and Social Council invited all interested Governments, the regional commissions, the specialized agencies and the international organizations concerned, when developing or updating appropriate codes and regulations, to take into account the recommendations of the Committee.

8. The provisions of the seventeenth revised edition of the *Model Regulations*[12] have been incorporated into the following international instruments:

(a) International Maritime Organization (IMO): International Maritime Dangerous Goods Code, amendment 36-12 (mandatory application for the 162 contracting parties to the International Convention for the Safety of Life at Sea from 1 January 2014, with the possibility of application on a voluntary basis from 1 January 2013);

(b) International Civil Aviation Organization (ICAO): 2013-2014 edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (mandatory application for the 191 contracting parties to the Convention on International Civil Aviation from 1 January 2013);

(c) International Air Transport Association: Dangerous Goods Regulations 2013 (fifty-third) edition (applicable from 1 January 2013);

[13] Ibid., Sales No. E.11.VIII.2.

(d) Economic Commission for Europe: European Agreement concerning the International Carriage of Dangerous Goods by Road (applicable from 1 January 2013, 48 contracting parties);

(e) Economic Commission for Europe: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (applicable from 1 January 2013, 17 contracting parties);

(f) Intergovernmental Organization for International Carriage by Rail: Regulations concerning the International Carriage of Dangerous Goods by Rail (appendix C to the Convention concerning International Carriage by Rail) (applicable from 1 January 2013, 48 contracting parties).

9. In the member States of the European Union, the provisions of the European Agreement concerning the International Carriage of Dangerous Goods by Road, the Regulations concerning the International Carriage of Dangerous Goods by Rail and the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways will also apply to domestic traffic from 1 January 2013.[14]

10. The Common Market of the South (MERCOSUR) countries (Argentina, Brazil, Paraguay and Uruguay) are applying an agreement on the inland transportation of dangerous goods (Acuerdo sobre Transporte de Mercancías Peligrosas en el MERCOSUR) based on the twelfth revised edition of the *Model Regulations*,[15] the Regulations concerning the International Carriage of Dangerous Goods by Rail and the European Agreement concerning the International Carriage of Dangerous Goods by Road, which is being updated on the basis of the seventeenth revised edition.

11. The Andean Community (Colombia, Ecuador, Peru and Plurinational State of Bolivia) have developed draft regulations based on the thirteenth revised edition of the *Model Regulations*,[16] the European Agreement concerning the International Carriage of Dangerous Goods by Road (2005) and the Regulations concerning the International Carriage of Dangerous Goods by Rail (2005), which are still under consideration.

12. In 1997, the Economic and Social Commission for Asia and the Pacific published the *Guidelines for the Establishment of National and Regional Systems for Inland Transportation of Dangerous Goods*,[17] recommending the implementation of the recommendations on the transport of dangerous goods. The transport ministers of the Association of Southeast Asian Nations (ASEAN) signed, on 20 September 2002, Protocol No. 9 to the ASEAN Framework Agreement on the Facilitation of Goods in Transit. The Protocol provides for the simplification of procedures and requirements for the transit transport of dangerous goods in ASEAN countries, using the Model Regulations and the European Agreement concerning the International Carriage of Dangerous Goods by Road. Annex I (Transport of dangerous goods) of the Greater Mekong Subregion Cross-Border Transport

[14] Commission Directive 2012/45/EU of 3 December 2012, adapting for the second time the annexes to Directive 2008/68/EC of the European Parliament and of the Council on the inland transport of dangerous goods to scientific and technical progress (*Official Journal of the European Union*, L 332/18 of 4 December 2012).

[15] United Nations publication, Sales No. E.01.VIII.4.

[16] Ibid., Sales No. E.03.VIII.5.

[17] Ibid., Sales No. E.98.II.F.49.

Agreement also requires the use of the Model Regulations and the European Agreement concerning the International Carriage of Dangerous Goods by Road for cross-border transport.

13. In 1999, the Central African Economic and Monetary Community (Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea and Gabon) adopted regulations concerning the transport of dangerous goods by road that are partly based on old provisions of the European Agreement concerning the International Carriage of Dangerous Goods by Road but that are not fully in line with the Model Regulations.

14. With respect to domestic inland transport of dangerous goods in individual countries, except as described above, implementation of the recommendations on the transport of dangerous goods may vary considerably depending on the national procedures for enacting law or updating regulations. For example, the regulations applicable in the United States of America (Title 49 of the Code of Federal Regulations) are normally updated on a yearly basis and they have been updated to reflect the seventeenth revised edition of the *Model Regulations*,[12] with very few exceptions. The Canadian regulations are based on the fourteenth revised edition[18] but consignees are authorized to use the classification and shipping names of the latest edition. They are being updated to reflect the seventeenth revised edition[12] of the *Model Regulations*. The *Australian Code for the Transport of Dangerous Goods by Road and Rail* (seventh edition) is based on the fourteenth revised edition of the *Model Regulations*.[18] The twelfth revised edition of the *Model Regulations*[15] has been adopted as a national standard in Malaysia and has been implemented through national legislation in Brazil. The regulations for road transport in Thailand are based on the 2011 edition of the European Agreement concerning the International Carriage of Dangerous Goods by Road[19] (reflecting the sixteenth revised edition of the *Model Regulations*) and are currently being updated to reflect the European Agreement concerning the International Carriage of Dangerous Goods by Road (2013 edition)[20] and the seventeenth revised edition[12] of the Model Regulations.

15. Although international transport of dangerous goods is facilitated by the harmonization of the major international conventions and agreements concerning the transport of dangerous goods with the Model Regulations, and their simultaneous updating, the fact that certain national regulations applicable to inland transport are not brought into line simultaneously, or completely, is still causing problems in international trade, in particular in the case of multimodal transport. For that reason, the Committee has maintained in its draft programme of work an item on global harmonization of regulations on the transport of dangerous goods with the Model Regulations.

C. Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals

16. The World Summit on Sustainable Development, held in 2002 in Johannesburg, in paragraph 23 (c) of its Plan of Implementation,[6] encouraged

[18] Ibid., Sales No. E.05.VIII.1 and corrigendum.

[19] Ibid., Sales No. E.10.VIII.4.

[20] Ibid., Sales No. E.12.VIII.1.

countries to implement the Globally Harmonized System of Classification and Labelling of Chemicals as soon as possible with a view to having the system fully operational by 2008.

17. Since the Globally Harmonized System addresses several sectors (transport, consumers, occupational health and safety and the environment), its effective implementation requires significant efforts from Member States to amend many existing legal texts concerning chemical safety in each sector or to enact new legislation.

18. In the transport sector, the Model Regulations have already been updated to reflect the relevant provisions of the fourth revised edition of the *Globally Harmonized System*.[9] All the major international instruments listed in paragraph 8 above have also been amended accordingly for effective application in 2013, as have all national regulations that are based on those instruments or that are regularly updated on the basis of the Model Regulations.

19. In the other sectors, the situation is more complex, because implementation requires the amendment or revision of a considerable number of different legal texts and guidelines for application.

20. Legal instruments or national standards implementing the Globally Harmonized System (or allowing its application) in one or several sectors have already been issued in Australia (2012), Brazil (2009), China (2010), Ecuador (2009), Japan (2006), Mauritius (2004), Mexico (2011), New Zealand (2001), the Republic of Korea (2006), Russian Federation (2010), Serbia (2010), Singapore (2008), South Africa (2009), Switzerland (2009), Thailand (2012), United States of America (2012), Uruguay (2009) and Viet Nam (2009), as well as in the 27 countries members of the European Union and the 3 countries members of the European Economic Area (2008).

21. Among the countries that have already implemented the system, the member States of the European Union updated their legal instruments in accordance with the provisions of the third revised edition of the *Globally Harmonized System*[21] in 2011 and 2012. Work to update them in accordance with the fourth revised edition[9] is ongoing and it is expected that the revised legal instruments will be adopted in 2013.

22. Other countries, such as Canada, Chile, China, Indonesia, the Philippines and Zambia, continue to work on the revision and amendment of their legal texts, standards and guidelines to achieve implementation of the Globally Harmonized System as soon as possible. Some others, such as Barbados, Bolivia, Colombia, the Democratic Republic of the Congo, the Gambia, Guatemala, Jamaica, Kyrgyzstan, Malaysia, Qatar and Tajikistan, have initiated or been involved in projects and activities related to the implementation of the Globally Harmonized System in 2011-2012 (see para. 26).

23. In order to monitor the status of implementation of the Globally Harmonized System, the secretariat has placed on its website[8] all the information it has collected from countries. The website provides the possibility for Government administrations to update this information or to submit new information for the various sectors concerned. **All countries are therefore invited to provide such information, as**

[21] Ibid., Sales No. E.09.II.E.10.

indicated in paragraph 6 of part B of the draft resolution contained in paragraph 1 above.

24. Direct technical advice and expertise have been provided to stakeholders by some Member States and by the secretariat.

25. In particular, the secretariat was invited to provide information about the Globally Harmonized System, its status of implementation and the work of the Committee of Experts and its two subcommittees, at the following events organized by industry associations, private institutions or governmental bodies:

(a) National workshop on the Globally Harmonized System, organized by the Ministry of Environment, Housing and Terrestrial Development as the focal point for the Strategic Approach to International Chemicals Management (SAICM) project in Colombia, with the support of the United Nations Organization for Industrial Development (UNIDO) (Bogotá, September 2011);

(b) Regional workshop on environmentally safe transboundary movement of hazardous chemicals and wastes for the English-speaking African countries organized by the Africa Institute for Environmentally Sound Management of Hazardous and other Wastes (Mauritius, June 2012);

(c) Several seminars and conferences organized by private institutions and industry associations involved in the management of chemicals, held in Belgium (March 2011 and 2012), Spain (May and July 2010), Austria (June 2011) and Germany (November 2011).

26. With the logistic, technical or financial support of several Member States, international organizations (International Labour Organization, the United Nations Environment Programme (UNEP), World Health Organization (WHO) and Rotterdam Convention Secretariat), intergovernmental organizations (Commonwealth of Independent States (CIS) and the European Union), governmental agencies and the private sector, several additional capacity-building and training activities or projects were conducted, in particular:

(a) Within the framework of the United Nations Institute for Training and Research (UNITAR)/International Labour Organization (ILO) Global Capacity-building Programme on the Globally Harmonized System and the UNITAR/ILO/ Organization for Economic Cooperation and Development World Summit on Sustainable Development Global Partnership for Capacity-building to Implement the Globally Harmonized System:

(i) Project activities related to the legal implementation and development of enforcement mechanisms, strengthening capacities for implementation of SAICM and supporting Globally Harmonized System capacity-building (funded under the SAICM Quick Start Programme Trust Fund) approved for or already initiated in the Plurinational State of Bolivia, Chile, Colombia, the Democratic Republic of the Congo, Guatemala, Kyrgyzstan, Mexico and Tajikistan;

(ii) Activities related to the development and completion of draft Globally Harmonized System national implementation strategies or Globally Harmonized System implementation road map plans in Barbados, the Democratic Republic of the Congo, the Gambia, Jamaica, Malaysia and Zambia;

(iii) Activities organized in the context of the second phase of the project on strengthening national and regional capacities to implement the Globally Harmonized System in ASEAN, conducted in China, Indonesia, Malaysia, the Philippines and Thailand;

(iv) Training and awareness-raising events, including:

a. National workshops and/or training courses in Barbados, China, the Democratic Republic of the Congo, the Gambia, Indonesia, Malaysia, the Philippines, Thailand and Zambia;

b. Regional Globally Harmonized System workshop for the member States of the Gulf Coordination Council (Qatar, February 2011);

c. Practical training and capacity-building workshop on the Globally Harmonized System on assisting the public and private sectors in southern African countries with implementation of the Globally Harmonized System (Durban, South Africa, March 2011);

d. Side event on linkages between the international chemicals conventions (Rotterdam, Stockholm and Basel Conventions) and the Globally Harmonized System during the fifth meeting of the Conference of the Parties to the Rotterdam Convention (Geneva, June 2011);

e. Fourth international conference of the CIS countries on the regulation of chemical product safety, Globally Harmonized System of Classification and Labelling of Chemicals and related issues (Astana, Kazakhstan, October 2011);

f. Side events during the United Nations Conference on Sustainable Development on the theme "The Globally Harmonized System and the Global Partnership, a success story from Rio to Rio: achievements, lessons learned and future directions" and "Partnerships contributing to the Future We Want" (Rio de Janeiro, Brazil, June 2012);

g. "Globally Harmonized System stocktaking workshop for Central and Eastern European countries" (Chisinau, Moldova, July 2012);

(v) Development of resource materials:

a. Completion of the development and revision of basic and advanced training courses on the Globally Harmonized System ("Introductory Globally Harmonized System training course" and "Classifying chemicals according to the Globally Harmonized System, and Globally Harmonized System labels and safety data sheets") to take account of the comments received after the pilot-testing activities conducted in China, Indonesia, the Philippines and Thailand;

b. Continuing work on the adaptation of the basic and advanced training courses into e-learning courses;

c. Revision of the guidance document "Linkages between the Globally Harmonized System and the other International Chemicals Conventions" and updating of the document "Understanding the Globally Harmonized System of Classification and Labelling of Chemicals (GHS): A companion guide to the GHS Purple Book", based on the fourth revised edition of the Globally Harmonized System;[9]

(vi) Seventeenth, eighteenth and nineteenth meetings of the capacity-building programme advisory group, which were held back-to-back with those of the Subcommittee;

(b) Asia-Pacific Economic Cooperation: meetings of the Chemical Dialogue and follow-up meetings of various working groups where Globally Harmonized System implementation issues are under consideration;

(c) WHO/ILO/UNEP International Programme on Chemical Safety:

(i) Continuous review and update of the International Chemical Safety Cards to include Globally Harmonized System classification and labelling. Since 2006, all newly prepared or updated cards include classifications according to the Globally Harmonized System;

(ii) Release in 2009 of a revised version of *The WHO Recommended Classification of Pesticides by Hazard*, incorporating for the first time the principles of the Globally Harmonized System for classification and labelling;

(d) Inter-Organization Programme for the Sound Management of Chemicals: development of various tools and resources to support implementation of SAICM and the Globally Harmonized System.

27. The Subcommittee of Experts on the Globally Harmonized System has also continued its cooperation with treaty bodies that administer certain international conventions dealing with specific aspects of chemical safety in order to facilitate the implementation of the Globally Harmonized System through such conventions (Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; Montreal Protocol on Substances that Deplete the Ozone Layer; Stockholm Convention on Persistent Organic Pollutants; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; and Convention on the Transboundary Effects of Industrial Accidents) (see also para. 45).

III. Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals during the biennium 2011-2012

A. Meetings held

28. The following meetings were held during the biennium 2011-2012:

(a) Subcommittee of Experts on the Transport of Dangerous Goods: thirty-ninth session, 20 to 24 June 2011 (ST/SG/AC.10/C.3/78); fortieth session, 28 November to 7 December 2011 (ST/SG/AC.10/C.3/80); forty-first session, 25 June to 4 July 2012 (ST/SG/AC.10/C.3/82 and Add.1); and forty-second session, 3 to 11 December 2012 (ST/SG/AC.10/C.3/84);

(b) Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals: twenty-first session, 27 to 29 June 2011 (ST/SG/AC.10/C.4/42); twenty-second session, 7 to 9 December 2011

(ST/SG/AC.10/C.4/44); twenty-third session, 4 to 6 July 2012 (ST/SG/AC.10/C.4/46); and twenty-fourth session, 12 to 14 December 2012 (ST/SG/AC.10/C.4/48);

(c) Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals: sixth session, 14 December 2012 (ST/SG/AC.10/40 and Add.1-3).

29. The following 31 countries participated in the work of the Committee as full members of the Subcommittee of Experts on the Transport of Dangerous Goods or the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals or of both Subcommittees: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Denmark,[22] Finland, France, Germany, Ireland,[22] Italy, Japan, Kenya, Mexico,[23] the Netherlands, Norway, Poland, Portugal, Qatar,[22] the Republic of Korea, the Russian Federation, Serbia,[22] South Africa, Spain, Sweden, Switzerland,[23] the United Kingdom of Great Britain and Northern Ireland, the United States of America and Zambia.[22]

30. India and Morocco, full members of the Subcommittee of Experts on the Transport of Dangerous Goods, Greece, New Zealand, Nigeria, Senegal and Ukraine, full members of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, and the Czech Republic and the Islamic Republic of Iran, full members of both Subcommittees, did not participate.

31. The Governments of Chile, the Democratic Republic of the Congo, the Philippines, Romania, Slovakia, Switzerland,[22] Thailand, and Zambia[23] were represented by observers. The European Union and the Council of Europe, seven specialized agencies and intergovernmental organizations and 49 non-governmental organizations also participated.

32. Liaison was maintained with the international bodies or organizations responsible for individual modes of transport, in particular the Economic Commission for Europe, ICAO, IMO and the Intergovernmental Organization for International Carriage by Rail.

33. The Committee paid special attention to the coordination of its own activities with those of other international organizations whose activities impinge on the field of transport of dangerous goods or of classification and labelling of chemicals, such as the International Atomic Energy Agency (IAEA), ILO, WHO, UNITAR and the Organization for Economic Cooperation and Development, to ensure that their work would complement, rather than duplicate or clash with, its own activities and recommendations.

34. Secretariat services were provided by the secretariat of the Economic Commission for Europe.

[22] Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals only.

[23] Subcommittee of Experts on the Transport of Dangerous Goods only.

B. Work of the Subcommittee of Experts on the Transport of Dangerous Goods

35. During the biennium 2011-2012, the Subcommittee discussed various questions related to its terms of reference in accordance with the programme of work laid out in document E/2011/91, in paragraph 48 (a).

36. On the basis of that work, the Committee adopted amendments[2] to the seventeenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations* and to the fifth revised edition of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* consisting mainly of new or revised provisions concerning:

(a) Radioactive material (harmonization with the 2012 version of the IAEA Regulations for the Safe Transport of Radioactive Material, in cooperation with IAEA);

(b) The listing and classification of some existing and new dangerous substances and articles (for example, asbestos, ammonium nitrate, adsorbed gases and neutron radiation detectors), related packing and test methods, and the revision of some packing and tank requirements;

(c) Electric storage systems (including testing of lithium batteries, lithium-ion capacitors, waste of damaged/defective lithium batteries and packaging for large batteries);

(d) The testing of gas cartridges and fuel cell cartridges;

(e) The marking of bundles of cylinders;

(f) The applicability of International Organization for Standardization standards to the manufacture of new pressure receptacles or service equipment;

(g) New test method for testing oxidizing solids;

(h) Explosives and related matters.

37. The Subcommittee updated guiding principles intended to explain the rationale behind the provisions contained in the Model Regulations and to guide regulators when assigning transport requirements to specific dangerous goods.

38. The Subcommittee considered the issue of possible further measures to facilitate global harmonization of regulations on the transport of dangerous goods with the Model Regulations already discussed in the previous biennium (see also para. 15 above). It agreed again that additional efforts should be made to improve harmonization at the worldwide level. **Governments and international organizations concerned are invited to provide feedback by drawing attention to requirements in their national, regional, or international instruments that deviate from the Model Regulations.**

39. Acting as the focal point for physical hazards regarding the development and updating of the Globally Harmonized System, the Subcommittee prepared proposals for new criteria, which were endorsed by the Subcommittee of Experts on the Globally Harmonized System and the Committee (see subpara. 42 (a) below). Work undertaken regarding substances that when in contact with water emit toxic gases,

oxidizing solids, desensitized explosives and corrosivity criteria should be pursued in the biennium 2013-2014 (see also para. 43 below).

40. **The action recommended by the Committee to be taken by the Economic and Social Council with respect to the work of the Subcommittee of Experts on the Transport of Dangerous Goods is reflected in part A, paragraphs 1 to 6, of the draft resolution contained in paragraph 1 of the present report.**

C. Work of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals

41. During the biennium 2011-2012, the Subcommittee discussed various questions related to its terms of reference in accordance with its programme of work laid out in document E/2011/91, paragraph 48 (b).

42. On the basis of that work, the Committee adopted amendments[10] to the fourth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals* intended to update, clarify or to complement the System concerning, in particular, the following:

(a) A new test method for oxidizing solids;

(b) Miscellaneous amendments intended to further clarify the criteria for the hazard classes skin corrosion/irritation, severe eye damage/irritation, and aerosols;

(c) Revised and simplified classification and labelling summary tables;

(d) A new codification system for hazard pictograms;

(e) Further rationalization of the precautionary statements;

(f) Miscellaneous amendments intended to complement the information to be included in the Safety Data Sheet regarding in particular:

(i) Additional safety and environmental information to address the needs of transport workers in the bulk transport of dangerous goods subject to IMO or national regulations;

(ii) Information on hazards that do not result in classification (for example, dust explosion hazards);

(iii) Precautions for safe handling and suitable extinguishing media;

(iv) Toxicological information (health effects and environmental impact).

43. The Subcommittee considered that the work in the following areas should be continued in the biennium 2013-2014: explosives and related matters; classification and testing of oxidizing solids; issues related to dust explosion hazards; corrosivity criteria (consideration of pitting corrosion and suitability of tests C.1 for solids and further alignment of the criteria in the Globally Harmonized System with that of the Model Regulations); aspiration hazards; water-activated toxicity; implementation issues; improvement of annexes 1-3 of the Globally Harmonized System and further rationalization of precautionary statements; and development of additional guidance on classification and labelling, as needed.

44. The Subcommittee kept under review progress made in the implementation of the Globally Harmonized System on the basis of reports submitted by its members and participating intergovernmental and non-governmental organizations.[8]

45. The Subcommittee continued to cooperate with treaty bodies established under international conventions concerning chemical safety to promote the implementation of the Globally Harmonized System through such conventions (see also para. 27 above).

46. **The action recommended by the Committee to be taken by the Economic and Social Council with respect to the work of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals is reflected in part B, paragraphs 1 to 7, of the draft resolution contained in paragraph 1 of the present report.**

IV. Programme of work and schedule of meetings for the biennium 2013-2014

47. The Committee agreed that the programme of work for the biennium 2013-2014 should be as follows:

(a) Subcommittee of Experts on the Transport of Dangerous Goods:

(i) Explosives and related matters (including amendments to the list of dangerous goods; desensitized explosives; tests and criteria for flash compositions; review of tests series 6; review of tests in parts I and II of the *Manual of Tests and Criteria*; review of packing instructions for explosives);

(ii) Listing, classification and packing (including amendments to the list of dangerous goods; classification of polymerizing substances; classification of substances listed by name in the dangerous goods list that do not meet the classification criteria or that meet the criteria for hazards not identified in the list);

(iii) Electric storage systems (including testing of lithium batteries, safety procedures for damaged/defective lithium batteries not covered by current regulatory text; transport of large batteries; thermal batteries);

(iv) Transport of gases (including transport of ethylene oxide and propylene oxide mixtures; global recognition of UN and non-UN pressure receptacles; composite cylinders);

(v) Miscellaneous proposals of amendments to the Model Regulations (including fuels in machinery or equipment; articles containing small quantities of dangerous goods; used medical devices; transport of environmentally hazardous substances; terminology issues; marking and labelling issues; packaging issues; tank issues; scope of section 5.5.3);

(vi) Electronic data interchange;

(vii) Cooperation with IAEA (including transport of radioactive material possessing additional hazards);

(viii) Global harmonization of transport of dangerous goods regulations with the Model Regulations;

(ix) Guiding principles for the Model Regulations (updating, including rationale for assignment of E codes);

(x) Issues relating to the Subcommittee of Experts on the Globally Harmonized System (including corrosivity criteria; criteria for water reactivity, classification and testing of oxidizing solids; expert judgement/weight of evidence);

(b) Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals:

(i) Classification criteria and related hazard communication, including:

a. Explosives and related matters (including classification of desensitized explosives and revision of the test methods in parts I and II of the *Manual of Tests and Criteria*);

b. Corrosion of metals (pitting corrosion and suitability of tests C.1 for solids);

c. Water activated toxicity;

d. Evaluation of classification criteria and flammability categories for certain refrigerants;

e. Classification and testing of oxidizing solids;

f. Practical classification issues;

g. Corrosivity criteria: Further alignment of corrosivity criteria in Class 8 of the Model Regulations with the criteria of the Globally Harmonized System;

h. Dust explosion hazards;

i. Aspiration hazards: viscosity criterion for classification of mixtures;

j. Nanomaterials;

k. Classification of polymerizing substances;

(ii) Hazard communication issues, including the revision of section 9 of annex 4; labelling of small packagings; and improvement of annexes 1-3 and further rationalization of precautionary statements;

(iii) Implementation issues, including:

a. The possible development of a global list of chemicals classified according to the Globally Harmonized System;

b. Activities to facilitate the coordinated implementation of the Globally Harmonized System and monitor its status of implementation;

c. Strengthening and increasing cooperation with United Nations programmes and specialized agencies and regional, governmental and intergovernmental organizations, as well as non-governmental organizations responsible for the administration of international agreements and conventions dealing with the management of chemicals, so as to give effect to the Globally Harmonized System through such instruments;

(iv) Development of guidance on the application of the criteria, as needed, including examples illustrating application of the classification criteria and any

related hazard communication issues, and alignment of guidance in annex 9 (section A9.7) and annex 10 of the Globally Harmonized System with the criteria in chapter 4.1;

(v) Capacity-building, including:

a. Reviewing reports on training and capacity-building activities;

b. Providing assistance to United Nations programmes and specialized agencies involved in training and capacity-building activities, such as UNITAR, ILO, the Food and Agriculture Organization of the United Nations and the WHO/International Programme on Chemical Safety, through the development of guidance materials, advice with respect to their training programmes and identification of available expertise and resources.

48. Bearing in mind that, in accordance with Economic and Social Council resolution 1999/65, the maximum number of meeting days allocated to the Committee and its subsidiary bodies is 38 (76 meetings), the Committee agreed that the schedule of meetings for the period 2013-2014 should be as follows:

2013

24-28 June 2013: Subcommittee of Experts on the Transport of Dangerous Goods, thirty-third session (10 meetings)

1-3 June (morning) 2013: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, twenty-fifth session (5 meetings)

25 November-4 December (morning) 2013: Subcommittee of Experts on the Transport of Dangerous Goods, forty-fourth session (15 meetings)

4 (afternoon)-6 December 2013: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, twenty-sixth session (5 meetings)

Total: Subcommittee of Experts on the Transport of Dangerous Goods: 25 meetings; Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals: 10 meetings

2014

23 June-2 July (morning) 2014: Subcommittee of Experts on the Transport of Dangerous Goods, forty-fifth session (15 meetings)

2 (afternoon)-4 July 2014: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, twenty-seventh session (5 meetings)

1-9 December 2014: Subcommittee of Experts on the Transport of Dangerous Goods, forty-sixth session (14 meetings)

10-12 December (morning) 2014: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, twenty-eight session (5 meetings)

12 December (afternoon) 2014: Committee, seventh session (1 meeting)

Total: Subcommittee of Experts on the Transport of Dangerous Goods: 29 meetings; Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals: 10 meetings; Committee: 1 meeting

49. **Action recommended by the Committee to be taken by the Economic and Social Council with respect to its programme of work is reflected in part C, paragraphs 1 to 3, of the draft resolution contained in paragraph 1 of the present report.**